

ABSTRACT

Systems and methods for producing a substernal space accessed via a sub-xyphoid incision. The space produced facilitates carrying out surgery, such as coronary artery bypass graft surgery with minimal trauma to a patient. Transabdominal approaches described utilize devices that lift the sternum and depress the abdomen or perform each such task as well as compress the sides of a patient's thorax, or lift the sternum and compress the sides of the thorax. Various devices including screw drives, winches, inflation and linkage mechanisms are described to achieve the stated results.